

CLAIMS

1. Spectrometer apparatus including a radiation transparent window (12) for supporting a sample on a surface (12H), an optical system (19) for directing radiation onto the sample through the window (12) at an angle to the normal to the window surface and for receiving radiation reflected from the sample through the window, characterised in that the apparatus includes a corrective optics device (40) arranged to increase the accuracy of imaging of the surface of the sample.
2. Spectrometer apparatus according to Claim 1, characterised in that the corrective optics device includes a wedge-shape prism (40).
3. Spectrometer apparatus according to any one of the preceding claims, characterised in that the corrective optics device (40) is located adjacent a focus of the optical system (19).
4. Spectrometer apparatus according to any one of the preceding claims, characterised in that the corrective optics device (40) is located to receive radiation from the sample.
5. Spectrometer apparatus according to any one of the preceding claims, characterised in that the corrective optics device (40) is located adjacent a reflector (28).
6. Spectrometer apparatus according to Claim 5, characterised in that the corrective optics device (40) has a reflecting surface (28) formed on a face (41) of the device.
7. Spectrometer apparatus according to any one of the preceding claims, characterised in that the apparatus includes an imaging detector (4) arranged to receive radiation from the optical system (19).
8. Spectrometer apparatus according to any one of the preceding claims, characterised in that the apparatus includes an arm (13) for applying pressure to urge the sample into close contact with the window surface (12H).

9. An spectrometer system including a source (2) of infrared radiation, an analyser (3), an imaging detector (4) and an ATR unit (1) including a radiation transparent window (12) for supporting a sample on a surface (12H), an optical system (19) for directing radiation onto the sample through the window (12) at an angle to the normal to the window surface (12H) and for receiving radiation reflected from the sample through the window, characterised in that the apparatus includes a corrective wedge-shape prism (40) located in the path of radiation to correct focal plane orientation such that it lies closer to the surface (12H) of the window (12).
10. An spectrometer system including a source (2) of infrared radiation, an analyser (3), an imaging detector (4) and an ATR unit (1) including a radiation transparent window (12) for supporting a sample on a surface (12H), an optical system (19) for directing radiation onto the sample through the window (12) at an angle to the normal to the window surface (12H) and for receiving radiation reflected from the sample through the window, characterised in that the apparatus includes a corrective wedge-shape prism (40) located in the path of radiation to correct anamorphic magnification at the surface (12H) of the window (12).